Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. - 9. (Cancelled)

10. (Currently Amended) A electromechanical transducer device comprising:

a first substrate;

a second substrate mounted on the first substrate by at least one pair of solid state hinges;

at least one first elongated electrical conductor extending in a first direction located on a surface of the first substrate facing the second substrate[[,]]; and

at least one second elongated electrical conductor extending in a second direction, which is the same as the first direction, located on a surface of the second substrate facing the first substrate;

wherein:

~~the first and second substrates are located relative to each other in such a way~~ the surface of the first substrate and the surface of the second substrate are parallel and a gap between the second substrate and the first substrate is about 15 nm or less such that the first and second elongated electrical conductors are opposed to each other at a distance permitting a detectable quantum tunneling current when a suitable electrical potential difference is applied between the first and second elongated electrical conductors; and

the at least one pair of solid state hinges are configured to permit a linear motion of the second substrate with respect to the first substrate in a direction perpendicular to the second direction.

11. (Cancelled)

12. (Previously Presented) The electromechanical transducer device of claim 10, wherein the at least one pair of solid state hinges are resilient and are dimensioned to have a

stiffness in the second direction lower than that in a direction perpendicular to the second direction.

13. (Previously Presented) The electromechanical transducer device of claim 10, wherein each of the at least one pair of solid state hinges comprises at least one outstanding pillar or post from one of the first and second substrates and a web integrally joining the pillar to an edge region of the other of the first and second substrates.

14. (Previously Presented) The electromechanical transducer device of claim 13, wherein the webs of the at least one pair of solid state hinges are in mutual co-planar alignment.

15. (Previously Presented) The electromechanical transducer device of claim 10, wherein the second substrate has an area smaller than that of the first substrate.

16. (Previously Presented) The electromechanical transducer device of claim 10, wherein:

the first and second substrates are semiconductor substrates; and

the first and second elongated electrical conductors comprise elongated doped regions located on the semiconductor substrates.

17. (Previously Presented) The electromechanical transducer device of claim 10, wherein:

the first and second substrates are semiconductor substrates; and

the first and second elongated electrical conductors comprise metal rails located on the semiconductor substrates.

18. (Cancelled)

19. (Previously Presented) The electromechanical transducer device of claim 10, wherein a gap between the second substrate and the first substrate is about 5 nm or less.

20. (Currently Amended) A electromechanical transducer device comprising:

a first substrate;

a second substrate mounted on the first substrate by at least one solid state hinge;

a first plurality of elongated electrical conductors extending in a first direction located on a surface of the first substrate facing the second substrate[[,]];

a second plurality of elongated electrical conductors extending in a second direction which is the same as the first direction, located on a surface of the second substrate facing the first substrate;

wherein:

~~the first and second substrates are located relative to each other in such a way~~ the surface of the first substrate and the surface of the second substrate are parallel and a gap between the second substrate and the first substrate is about 15 nm or less such that each of the first plurality of elongated electrical conductors are located opposed to a corresponding conductor of the second plurality of elongated electrical conductors at a distance permitting a detectable quantum tunneling current when a suitable electrical potential difference is applied between the first and second elongated electrical conductors; and

the solid state hinge permits an angular rotation of the second substrate with respect to the first substrate.

21. (Cancelled)

22. (Previously Presented) The electromechanical transducer device of claim 20, wherein the at least one solid state hinge comprises at least one outstanding pillar or post from one of the first and second substrates and a web integrally joining the pillar to an edge region of the other of the first and second substrates.

23. (Previously Presented) The electromechanical transducer device of claim 20, wherein the second substrate has an area smaller than that of the first substrate.

24. (Previously Presented) The electromechanical transducer device of claim 20, wherein:

the first and second substrates are semiconductor substrates; and

the first plurality and the second plurality of elongated electrical conductors comprise elongated doped regions located on the semiconductor substrates.

25. (Previously Presented) The electromechanical transducer device of claim 20, wherein:

the first and second substrates are semiconductor substrates; and

the first plurality and the second plurality of elongated electrical conductors comprise metal rails located on the semiconductor substrates.

26. (Previously Presented) The electromechanical transducer device of claim 20, further comprising three more solid state hinges mounting the second substrate on the first substrate, wherein:

the solid state hinges are equi-angularly spaced with respect to a center of the second substrate, and

the angular rotation is within the plane of the second substrate.

27. (Previously Presented) The electromechanical transducer device of claim 20, wherein the angular rotation comprises a motion perpendicular to the plane of the second substrate.

28. (Cancelled)

29. (Previously Presented) The electromechanical transducer device of claim 20, wherein a gap between the second substrate and the first substrate is about 5 nm or less.

30. (New) The electromechanical transducer device of claim 14, wherein the at least one first elongated electrical conductor and the at least one second elongated electrical conductor are a directly opposed pair aligned parallel with a plane of the webs.

31. (New) The electromechanical transducer device of claim 22, wherein the first plurality of elongated electrical conductors and the second plurality of elongated electrical conductors are disposed in directly opposed pairs aligned parallel with a plane of the web.